Appendix A – California Environmental Quality Act Compliance Document

NOTICE OF EXEMPTION

To: Vince Minto, Clerk-Recorder
526 West Sycamore Street
Willows, CA 95988

From: Glenn-Colusa Irrigation District
344 East Laurel Street
Willows, CA 95988
(530) 934-8881

Project Title: Plan for Aquifer Performance Testing of Geologic Formations Underlying Glenn-Colusa Irrigation District, Orland Artois Water District, and Orland Unit Water Users Association Service Areas, Glenn County, CA.

Project Location: Glenn County Township 22N, Range 1W, Projected Section 19 and Township 21N, Range 1W, Projected Sections 5 & 7, (all of the above in the Capay Rancho), Township 22N, Range 2W, Sections 18, 29 and 30, Township 21N, Range 2W, Section 4, MDB&M, California. (See map of Project Location attached hereto as Figure 2.)

Description of Nature, Purpose, and Beneficiaries of Project:

The Project will be carried out by Glenn-Colusa Irrigation District (GCID), Orland-Artois Water District (OAWD) and Orland Unit Water Users Association (OUWUA), and is a two-year research program in Glenn County to drill up to five test holes, install up to seven test-production wells, and to conduct well efficiency and aquifer performance testing. GCID, OAWD and OUWUA formed the Stony Creek Fan Program (SCF Program) in 2001 for the purpose of studying potential conjunctive use water programs. The Project, also known as the "Aquifer Testing Plan," is in furtherance of the SCF Program and will help characterize the extent and distribution of the multiple aquifer systems within the SCF Program study area. A summary of the Project is set forth below, but a full description of the Project is set forth in Exhibit A, attached hereto, and incorporated herein by reference.

The test-production wells will be constructed to focus production on the lower aquifer systems. The aquifer performance testing and monitoring will be conducted to help identify the aquifer properties surrounding the individual test-production wells, and the regional interaction between the lower and upper aquifer systems. In order to accomplish this goal, aquifer performance testing will be conducted using single and multiple test-production wells during irrigation and non-irrigation periods. Preliminary testing of the lower aquifer system was conducted during April and May of 2007. Based

on the 2007 test data and the proposed adaptive monitoring associated with this program, the drilling and testing associated with this work will not result in significant impacts to the aquifer systems, surrounding groundwater users, or environmental resources, and will not result in a serious or major disturbance to an environmental resource. Data collection and testing associated with this work will yield much needed information that will be used to identify future sustainable management alternatives for the integrated groundwater and surface water resources of the region. Any necessary further environmental review will be conducted before the SCF Partners approve the integration of the test-production wells into the SCF Partners' water supply systems for any long-term local, regional or broader uses.

The two-year research program will be implemented in three phases. During Phase 1, the wells will be sited, drilled and tested for capacity and hydraulic parameters. During Phase 2, multi-day pumping tests will be conducted at each test-production well individually to refine estimated hydraulic parameters and assess any resulting changes in local groundwater levels. Finally, Phase 3 will assess regional changes to groundwater levels through aquifer performance testing over the 2008 and 2009 irrigation seasons. The Phase 3 groundwater pumping in 2008 will be limited by the number of wells, that have been installed and which have completed Phase 2 testing. The maximum groundwater extraction for the Phase 3 portion of the testing program is 15,000 acre-feet during the 2008 irrigation season, and 26,000 acre-feet during the 2009 irrigation season. All groundwater pumped under this Project will be used for irrigation in the SCF Partners' service areas, and none of this groundwater will be used outside of these service areas, either directly, or indirectly through a groundwater-substitution program.

The data resulting from these testing activities will be made available to the public and will provide a better understanding of the aquifer systems. The data will be used to better understand the recharge and other characteristics of the aquifer system, and to refine calibration of the Stony Creek Fan Integrated Groundwater and Surface Water Model (SCFIGSM), which will be an important source of information from which to base future decisions regarding local and regional conjunctive water use.

Potential site impacts include minor disturbance of the ground surface within and adjacent to the drill location, and a temporary increase in noise levels during drilling and installation of the well. Minor disturbance of the shallow ground surface during drilling operations may result due to:

- Mobilization and demobilization of drilling equipment;
- Support vehicle traffic, i.e., cars, trucks, water tanker truck, dump truck, front end loader;
- Discharge of inert drilling fluids (mixture of native clay and/or bentonite clay and water);
- Discharge of drill cuttings (volume of cuttings is estimated at 245 cubic yards).

The only site with potential noise impacts to residences would be the Stony Creek

site, where the closest residence is located approximately 200 feet away. The SCF Partners will contact the residents and work with them to address any of their concerns regarding noise as needed.

Name of Public Agency Approving Project: Glenn-Colusa Irrigation District.

Other Participating Agencies: Orland Artois Water District and Orland Unit Water Users Association.

Name of Person or Public Agency Carrying Out the Project: Glenn-Colusa Irrigation District, Orland Artois Water District and Orland Unit Water Users Association.

Environmental Review Completed by: Glenn-Colusa Irrigation District.

Exempt Status: Categorical exemption under the California Environmental Quality Act ("CEQA") Guidelines for basic data collection (Section 15306). Categorical exemption for minor alteration of land (Section 15304). Categorical exemption for new construction of limited small new facilities (Section 15303).

Reasons Why the Project Is Exempt:

- Section 15306 - basic data collection, research, experimental management, and resource evaluation activities, which do not result in a serious or major disturbance to an environmental resource. This exemption applies to all aspects of the Project, but especially to the two-year program to test the groundwater wells and collect the resulting data. An explanation of why the Project will not result in a serious or major disturbance to an environmental resource is set forth in Exhibits A and B, attached hereto and incorporated herein by reference. Exhibit A is a detailed plan describing all aspects of the Project. Exhibit B is a memorandum from hydrogeologist Kenneth Loy regarding why implementation of the Project will not cause a serious or major disturbance to an environmental resource or a significant impact on groundwater resources. Mr. Loy's memorandum also discusses the necessity of phasing the planning and the associated environmental review between the research activities contemplated in the SCF Aquifer Performance Test Plan and the actual implementation/use of the groundwater wells for potential future groundwater production.

- Section 15303 - Categorical exemption for new construction of limited small new facilities; installation of small new equipment and facilities in small structures; and conversion of the use of small existing structures. This categorical exemption applies to the construction or conversion and location of limited numbers of new small facilities or structures. This exemption applies to the physical facilities associated with the test-production wells. A description of those facilities is set forth in Exhibit A and demonstrates that the well facilities are small in size.

- Section 15304 - Categorical exemption for minor alteration in the condition of land,

such as grading, gardening, and landscaping. Section 15304 applies to minor public or private alterations in the condition of land, water, or vegetation that do not involve removal of healthy, mature, scenic trees except for forestry or agricultural purposes. This exemption includes grading on land with a slope of less than ten percent. This exemption applies to minor activities associated with installing the well facilities. Those activities are set forth in detail in Exhibit A.

Lead Agency Contact Person: Thaddeus L. Bettner, GCID General Manager, (530) 934-8881

Signature: _____

Date Received for Filing at Glenn County: _____

cc: Barbara Castro, DWRND

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Appendix B – Additional Information on Glenn County Groundwater Management Plan and Water Advisory Committee

In this regard, Glenn County adopted a groundwater management plan that incorporates sub area-specific Basin Management Objectives (BMOs) to guide the sustainable use of high quality groundwater. Under the plan, the County adopts BMOs based on recommendations from the WAC. The WAC consists of representatives of Glenn County, water purveyors, and Board of Supervisors Private Pumper Areas. The WAC personnel are appointed by the County Board of Supervisors. The TAC is made up of County Board of Supervisor appointees nominated by the agencies and representatives of the Private Pumper Areas comprising the Water Advisory Committee. Sub-area-specific BMOs are adopted by water agencies and Board of Supervisors Private Pumper Areas for their respective areas. Development of the BMOs are subject to the constraint that management actions associated with a BMO in one sub area would not result in the failure to maintain a BMO in a separate sub-area. All BMOs are developed and implemented based on monitoring of the aquifer system's response to the annual pumping, as indicated by groundwater levels, water quality, and rates of inelastic land subsidence.

The SCF Partners are members of the WAC, and their service areas are identified sub-areas defined in the Glenn County Groundwater Management Plan. The aquifer test approaches described in this plan are consistent with the Glenn County Groundwater Management Plan, and the development of sub-area-specific BMOs for each SCF Partners' respective service area. The future use of groundwater by the SCF Partners would be guided by the overall goals of the Glenn County Groundwater Management Plan, and the goals of the sub-area-specific BMOs.

Appendix C – ESA Consultation Biological Assessement and Consultation letters

United States Department of the Interior

BUREAU OF RECLAMATION
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, California 95825-1898

AUG 0 4 2008

IN REPLY
REFER TO:
MP-410
ENV-7.00

Ms. Susan Moore
Field Supervisor
U.S. Fish and Wildlife Service
Sacramento Fish and Wildlife Office
2800 Cottage Way, W-2605
Sacramento, CA 95825-1846

Subject: Request for Informal Consultation Pursuant to Section 7 of The Endangered Species Act Regarding the Glenn Colusa Irrigation District's Stony Creek Fan Aquifer Performance Testing Plan

Dear Ms. Moore:

The purpose of this letter is to request informal Section 7 consultation for the Glenn Colusa Irrigation District's (GCID) Stony Creek Fan Aquifer Performance Testing Plan (proposed action). A Biological Assessment (BA) for effects to the giant garter snake (*Thamnopsis gigas*) (GGS) prepared by the Bureau of Reclamation is enclosed.

The proposed action consists of the GCID, Orland Unit Water Users Association and Orland – Artois Water District (SCF Partners) installing up to 7 test-production wells and conducting well efficiency and aquifer performance testing. Specific details of the project are included in the enclosed draft Environmental Assessment (EA) and BA. The proposed action is located within the GCID service area, Glenn County, California.

A list of federally listed, proposed, and candidate species potentially occurring in the United States Geologic Service (USGS) 7.5 minute quadrangles: Kirkwood, Ord Ferry, Orland, Hamilton City, and Foster Island was obtained on June 10, 2008, by accessing the U.S. Fish and Wildlife Service (Service) Database (database). The proposed action is not anticipated to have the potential to affect any special status species other than GGS. Reclamation conducted a site assessment on May 8, 2008, with Tamara LaFramboise and Brad Hubbard of Reclamation and Ben Pennock of GCID. The project description in the BA and environmental consequences sections of the draft EA incorporate standard avoidance and minimization measures. Reclamation believes that the incorporation of these avoidance and minimization measures will ensure the proposed action is not likely to adversely affect GGS.

Therefore, Reclamation has determined that the proposed action may affect, is not likely to adversely affect GGS or potential GGS habitat occurring in the project vicinity. Reclamation requests that the Service provide written concurrence with this determination. Reclamation requests your response within 30 days of receipt of this letter.

If you have any questions regarding the enclosed material or require additional information, please contact Ms. Tamara LaFramboise, Natural Resources Specialist, at 916-978-5269.

Sincerely,

/S/ RICHARD J. WOODLEY

Richard J. Woodley
Regional Resources Manager

Enclosure

cc: Jana Milliken
Branch Chief
US Fish and Wildlife Service
2800 Cottage Way
Sacramento, CA 95825

bc: MP-120 (MHeaton), MP-410 (TLaFramboise)
(ea w/o enclosure)

WBR:TLaFramboise:amunson:7/31/008:916-978-5269
H:\PUB410\410 Corresp\TLaFramboise\SCFConsLtrtoFWS18Jul08.doc
Surnames: MP-410 (TLaFramboise, TSlavin), MP-400 (MHeaton, RWoodley)

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846

SEP 25 2008

In Reply Refer To:
81420-2008-I-1916-1

Memorandum

To: Mr. Richard Woodley, Regional Resources Manager, Mid-Pacific Regional Office, U.S. Bureau of Reclamation, Sacramento, California 95825-1898

From: Peter A. Cross
Chief, Endangered Species Division, Sacramento, Sacramento Fish and Wildlife Office. Sacramento, California

Subject: Request for Concurrence with a Determination of Not Likely to Adversely Affect for the Glenn-Colusa Irrigation District's Stony Creek Fan Aquifer Performance Testing Plan

On August 6, 2008, we received your memorandum dated August 4, 2008, requesting our concurrence that the Stony Creek Fan (SCF) Partners proposal to install and test seven high production groundwater wells inside the service areas of the partner districts; the Glenn-Colusa Irrigation District (GCID), Orland Unit Water Users Association (OUWUA) and Orland-Artois Water District (OAWD) may affect, but is not likely to adversely affect listed species. The U.S. Fish and Wildlife Service (Service) is responding pursuant to Section 7 of the Endangered Species Act of 1978, as amended (16 U.S.C. 1531 *et seq.*) (Act).

As described in the July 2008 Environmental Assessment (EA), the test wells will be installed in Glenn County, California. The exact well locations are described below. In addition to funding from the Bureau of Reclamation (Reclamation), SCF Partners have received funds from the California Department of Water Resources (DWR) for this project. This test project (conducted during the 2009 irrigation season) is intended to allow the SCF Partners to gather pertinent information to help better understand the complex aquifer systems in the Sacramento Valley and how they might be managed for conjunctive use in the future. Drilling of test holes and construction of test-production wells is scheduled to begin in late 2008 and be completed by early 2009.

Proposed Action

The SCF Partners plan to drill up to five test holes and construct up to seven test production wells. It is anticipated that the seven test-production wells will produce groundwater from geologic units at depths ranging from approximately 700 to 1,500 feet below ground surface. The anticipated geologic units from which groundwater will be pumped are the Plio-Pleistocene Tehama and Tuscan Formations. A total of 26,530 acre-feet (af) of groundwater would be

produced from the seven wells during the three phases of the test program: 70 af (10 af per well) during the 1-day constant rate test phase; 3,780 af (540 af per well) during the 30-day multi-day test phase; and 22,680 af (3,240 af per well) during the 180-day operational test phase. The GCID and OUWUA wells will be located adjacent to irrigation canals and the discharge pipes of these wells will be routed from the well sites to the canals, then down the canal bank slopes. Discharge will be at the edge of the canal water prism. The discharge piping for OAWD wells will be plumbed from each well site into an existing underground pipeline conveyance system. All of this water would be added into the existing conveyance facilities and mixed with Central Valley Project (CVP) water being delivered for agricultural uses.

In Phase 3, the wells will be operated during the 2009 irrigation season. This would allow all groundwater produced during this test phase to be delivered to agricultural water users in the three water districts. No pumped water would be delivered outside of the service areas of the SCF Partners, either directly or through exchange. In GCID and OUWUA, assuming the availability of a full surface water supply in 2009, surface water diversion and use would be reduced by the amount of groundwater pumped for testing. In the event that 2009 surface water supplies are limited due to dry hydrologic conditions, all the groundwater pumped by GCID and OUWUA for test purposes would be used to augment available surface water supplies. OAWD typically experiences surface water shortages nearly every year, so groundwater pumped for test purposes would expand the total quantity of water provided by the district, with the effect of reducing the amount of groundwater pumped by individual landowners to augment district water by approximately 6,000 af.

The test wells will be drilled using a large truck-mounted rotary drilling rig equipped with a mud pump, pipe rack, and drilling fluid holding tank/shaker system. Construction at each site will occur 24 hours per day, with lights necessary during nighttime activities, seven days per week for approximately one week. Other drilling and testing activities will be conducted during normal work hours (8am to 5pm). Additional support vehicles including a water tender, front-end loader, pipe truck, and pickup trucks will be parked on-site. The drilling rig and associated equipment will occupy an area of approximately 100 feet by 100 feet. Access for these vehicles will be directly off the adjacent paved/unpaved roads. No improvements for site access will be required. No off-site discharge of drill cuttings or fluids will occur during drilling. Drill cuttings and inert bentonite clay, produced during drilling operations, will be contained in a settling pond (12 feet long, 8 feet wide, 4 feet deep) constructed on-site and will either be spread on site in an approved location or may be hauled away if the material is not needed on site. The completed wells will consist of an 8 by 10 feet concrete pad, pump-house enclosure and 20-inch discharge pipe leading to nearby canals or tied into existing pipelines.

During construction, the following avoidance and minimization measures would be implemented in or near potential giant garter snake habitat to ensure minimal impacts to the snake:

1. Avoid construction activities within the banks of potential giant garter snake aquatic habitat. Confine movement of heavy equipment to existing roadways to minimize habitat disturbance.

2. Construction activity within known habitat areas will be conducted between May 1 and October 1. This is the active period for giant garter snake and direct mortality is lessened because snakes are expected to actively move and avoid danger. Between October 2 and April 30 contact the Service's Sacramento Fish and Wildlife Office to determine if additional measures are necessary to minimize and avoid take.

3. Confine clearing to the minimal area necessary to facilitate construction activities. Flag and designate giant garter snake habitat within or adjacent to the project area as Environmentally Sensitive Areas. These areas should be avoided by all construction personnel.

4. Construction personnel will receive Service-approved worker environmental awareness training. This training instructs workers to recognize giant garter snake and their habitat(s).

5. 24-hours prior to construction activities, the project area should be surveyed for giant garter snake, by a Service-approved biologist. The survey of the project area will be repeated if a lapse in construction activity of two weeks or greater has occurred. If a snake is encountered during construction, activities shall cease until appropriate corrective measures have been completed or it has been determined that the snake will not be harmed. Report any sightings and any incidental take to the Service immediately by telephone (916) 414-6620.

6. After completion of construction activities, remove any temporary fill and construction debris and, wherever feasible, restore disturbed areas to pre-project conditions.

Action Area

The action areas for installation of the test wells are small locations sited in GCID (3 sites), OUWUA (2 sites), and OAWD (2 sites) service areas, Glenn County, California. During aquifer testing all groundwater produced would be discharged into the District's water delivery system and commingled with surface water supplies and delivered to users for irrigation, rice straw decomposition, or maintenance of waterfowl habitat.. This intermingling of CVP water and groundwater in these canals makes them a part of the action area. None of the groundwater would be used outside of these service areas, either directly or indirectly through a groundwater-substitution program.

Each proposed well location would be contained within foot prints approximately 100 feet by 100 feet (0.23 acres) and the completed test production well facilities would occupy a smaller area within the construction zone. Existing roads would be used to access the proposed well locations. Road improvements or temporary roads are not necessary. Canals, drains, and rice fields that are within 200 feet of the proposed well locations, are evaluated as giant garter snake habitat.

Glenn-Colusa Irrigation District

GCID is the largest irrigation district in the Sacramento Valley with about 141,000 acres of agricultural land and 20,000 acres of managed waterfowl habitat with a gross service area of

about 175,000 acres. GCID's main surface water facilities include the 3,000 cubic feet per second (cfs) Sacramento River Pump Station located north of Hamilton City, a 65-mile main canal, and about 900 miles of distribution laterals and drains. Water supplied by GCID is used for irrigation, rice straw decomposition and maintenance of water fowl habitat. GCID does not provide water for municipal or industrial uses.

Orland-Artois Water District

The OAWD consists of 28,988 total acres interspersed with non-District lands in a checkerboard-like pattern. The District's CVP water supply contract is for a maximum of 53,000 af annually, subject to shortages as determined by Reclamation. The District water distribution system consists of about 100 miles of buried pipelines ranging in diameter from 8 to 96 inches. It was constructed over the period 1976 through 1983. The system is supplied from five permanent and three temporary turnouts from the Tehama-Colusa Canal (TCC), with a combined delivery capacity of about 427 cfs. About 16,767 acres are located down-gradient from the TCC and are served by gravity. The remaining 12,221 acres are up gradient and are served by electrically powered canal side pumping plants.

Orland Unit Water Users Association

The OUWUA successfully petitioned Reclamation (then the United States Reclamation Service) to develop the Orland Project, construction of which began in 1909. East Park Dam and Reservoir were completed in 1910, and Stony Gorge Dam and Reservoir were completed in 1928. Operation of East Park Reservoir and Stony Gorge Reservoir is coordinated with operation of the U.S. Army Corps of Engineers Black Butte Reservoir located downstream as needed to meet irrigation demands within the Orland Project. An average of 100,000 AF of surface water is distributed through 17 miles of open main canals and 137 miles of open laterals for irrigation of about 17,600 acres within the OUWUA's 20,200 acre area. OUWUA does not provide water for municipal or industrial uses.

Proposed Well Number 1 Orland Unit

Location: Located on Lateral 130 in Orland Unit, just south of County Road 9. General habitat in the area consists of agricultural. There is an almond orchard to the east, pasture to the west, and immediately north are the county road and railroad tracks. The canal is part of the Orland Unit infrastructure. It is a lined canal. There is a maintenance road that would be used to access the site for construction. In general, the area is highly disturbed and intensively managed for agriculture. There are no wetlands, rice fields or adjacent ditches within 200 feet that would provide habitat for the giant garter snake.

Proposed Well Number 2 Orland Unit

Location: Located on lateral 60 on Cleek Ranch properties, immediately north of County Road 18 and just south of County Road 9. General habitat includes a young almond orchard to the immediate east, a gravel maintenance road running north and parallel to lateral 60 canal (where water will be pumped), a walnut orchard to the west and the canal and County Road 18 on the southern border. A young almond orchard lies to the south of county road 18. There are no

wetlands, rice fields or adjacent ditches within 200 feet that would provide habitat for the giant garter snake.

Proposed well location Number 3 Orland-Artois

Location: Located on County Road 20, east of County Road P and west of County Road S within the Orland-Artois service area. The exact location of the well is north of County Road 20 in a barren almond orchard. Across County Road 20 to the southwest there is an almond orchard and to the southeast there is an olive orchard. There are no wetlands, rice fields or adjacent ditches within 200 feet that would provide habitat for the giant garter snake.

Proposed well location Number 4 Orland Artois

Location: Located south of County Road 24 and east of County Road S in the Orland Artois Water District service area. The well would be installed on the southern border of an almond orchard. There is an access road from CR 24 to this site. A walnut orchard lies to the south/southeast of the proposed well location. An olive orchard lies to the southwest. The orchards are intensively managed. The gravel access road is well maintained and heavily traveled. There are no wetlands, rice fields or adjacent ditches within 200 feet that would provide habitat for the giant garter snake.

Proposed well location Number 5 GCID

Location: Located off of west Highway 45, adjacent to the GCID main canal. The proposed well site is situated to the east of the main canal. On the eastside of the proposed well location are rice fields. There is a small ditch approximately 50 to 75 feet from the proposed well location. The ditch has characteristics which could be considered potential giant garter snake habitat.

Proposed well location Number 6 GCID

Location: Located northwest of Highway 45 and County Road 24 adjacent to the Glenn-Colusa siphon, west of the Stony Creek head gates and south of Stony Creek. A house is located to the east of the proposed well location. The GCID main canal and its access road lie to the south and the GCID main canal siphon is situated to the west. The area is highly disturbed, as vehicles travel to and from the house and also to the head gates for maintenance. The area lacks suitable habitat for giant garter snake. There are no wetlands, rice fields or adjacent ditches within 200 feet that would provide habitat for the giant garter snake.

Proposed well location Number 7 GCID

Location: Located northwest of Highway 32 and north of Highway 45 on the west levee of the GCID main canal near the Hamilton Union High School. To the north is the levee road, to the immediate west weeds, and 500 feet to the west there is an orchard. To the east is the Glenn Colusa main canal and to the south is the levee road. The banks of the canal are well maintained and there is no vegetative cover and the levee toe is maintained as compacted dirt access road. The area is highly disturbed and there are no rice fields or adjacent ditches within 200 feet that would provide habitat for the giant garter snake. No wetland vegetation is present within the area.

Well Construction The test holes and test-production wells would be drilled using a large truck-mounted reverse circulation rotary drilling rig equipped with a mud pump, pipe rack, and drilling fluid holding tank/shaker system. Geologic and geophysical data collected during the drilling of the test holes would be used to supplement information developed by the DWR Northern District and other researchers to describe the hydrogeologic framework of the groundwater basin.

General Habitat in the Project Area.

Developed/Disturbed – Developed and disturbed areas include major roads, highways, and buildings and structures within more urban areas, but also facilities and access roads which are located throughout agricultural areas near each proposed well location. Also included within this category are the unpaved turnouts and shoulders of dirt access roads.

Agriculture – Agriculture, irrigated with water diverted from the Sacramento River or Stony Creek watershed, dominates the surrounding landscape. Major crops include rice and deciduous orchard (walnut, almond, and olive). These crops are irrigated by either a series of canals (OUWUA and GCID) or through underground piping (OA) that delivers water from the Sacramento River or Stony Creek. All ditches owned and managed by the SCF Partners are actively maintained, and generally lack dense upland or aquatic vegetation. The delivery canals within the action area are generally well maintained and concrete lined, and support minimal vegetation. There is one unlined drainage ditch supporting a low density of emergent aquatic vegetation that occurs in the vicinity of proposed well number 5. All of the proposed well locations are located in or adjacent to agricultural areas. The delivery canals that are proposed for conveyance of groundwater are surrounded by lands in active crop production. The GCID canal is not a lined canal, but supports a maximum capacity of 3,000 cfs.

Environmental Baseline

The biological assessment (BA) prepared by Reclamation under Section 7(a)(2) of the ESA evaluated potential effects to the giant garter snake and determined that the proposed action may affect, but is not likely to adversely affect giant garter snake. The proposed location of well number 5 is near potential giant garter snake habitat. However, a California Natural Diversity Database (CNDDB) search indicates no sighting of giant garter snake in the vicinity of the test wells. The nearest CNDDB (2008) recorded sighting occurred in 2005 across the Sacramento River in the Ord Ferry quad, approximately 4.5 miles to the east of the well number 5 location. Giant garter snakes are known to be present at Sacramento Wildlife Refuge located approximately 15 miles to the southwest in GCID, and the area between these locations is primarily planted in rice and networked with ditches and canals that could provide suitable habitat for giant garter snakes.

GCID currently manages the location adjacent to proposed well number 5 for agriculture. The area is bounded by rice fields on the east. The proposed well location is bounde by GCID's main canal on the west. GCID's main canal was constructed in the late 1800's and has been actively maintained for weed and rodent control. This section of the main canal is accessed several times a day by GCID personnel. The lands adjacent to the main canal have historically been in rice production, however, there are times, during short water supply, when those fields were

temporarily fallowed or planted in a less water intensive crop such as wheat. During this project, the fields (to the east) will be in rice production.

The area where construction would occur is covered with gravel and does not support burrows or crevices that could be used as hibernacula by the giant garter snake. Additionally, there is no emergent aquatic vegetation at the location for construction. However, the drain located approximately 50 to 75 feet from the well site contains small amounts of aquatic vegetation and the fields east of the well are currently planted in rice. The drain's terminus is perpendicular to the proposed construction area for well number 5. From the westernmost terminus the drain runs eastward about a quarter mile then intersects with a drain flowing north to south parallel to Highway 45. The drain continues about a quarter mile south of the intersection point (of the drains), turns eastward and flows underneath Highway 45.

Effects Analysis for Giant Garter Snake

Under the Act, direct effects are those that are caused by the proposed action and occur at the time of the action. Indirect effects are caused by or result from the proposed action, are later in time, and are reasonably certain to occur. Indirect effects may occur outside of the area directly affected by the action. Interrelated and interdependent effects of the action are those effects of interrelated and interdependent actions which are generally non-Federal. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration.

Construction of wells 1, 2, 3, 4, 6, and 7 would not affect giant garter snake or giant garter snake habitat. The snake does not occur in those areas and there is no suitable giant garter snake habitat found near the construction action areas for those wells. Well number 5 is the only location which may affect giant garter snake.

There would be no direct effects to the potential giant garter snake habitat located in the drain approximately 50-75 feet southeast of well number 5. Construction activities would only occur in the gravel roadway and there would be no removal of aquatic vegetation from the drain and there would be no clearing of any upland vegetation as part of this action. Because drilling activities would occur near the drain, there could be potential noise disturbance, for a limited time period.

The potential effects to giant garter snake and giant garter snake habitat at all of the well locations would be minimized by employing the standard avoidance and minimization measures described above. In particular, the drain and nearby rice fields would be flagged and considered an environmentally sensitive area which construction workers would be required to avoid. All construction work for the installation of well number 5 will be completed during the active period for the snakes; between May 1 and October 1. The concise construction period (one week, 24 hours/day) would further minimize or eliminate effects

We have reviewed the information transmitted with your correspondence and concur with the determination that the project may affect, but is not likely to adversely affect the listed giant

garter snake within the action area because the wells will be located in areas that are highly disturbed and planted with upland crops or have ruderal vegetation present; except for well location number 5. This location has a canal and rice fields that could provide giant garter snake habit within 200 feet. However, because the well will be drilled in a gravel roadway/turn-around area removed from vegetated areas, and because the avoidance and minimization measures included in the project description will be implemented, adverse affects to giant garter snakes can be avoided. In addition, all of the water pumped from the seven test wells during the initial testing and during 2009 irrigation season (26,530 af) will be pumped into the surface water system being used to deliver irrigation water to rice fields and upland crops in the action area. Because the majority of the acreage planted in the three water districts is planted in rice, this would have a positive affect on any giant garter snakes that use those areas.

Therefore, unless new information reveals effects of the proposed action that may affect listed species in a manner or to an extent not considered in the opinion, or a new species or critical habitat is designated that may be affected by the proposed action, no further action, pursuant to the Act is necessary.

If you have any questions regarding this letter, please contact Dan Russell or Mike Welsh at (916) 414-6620.